

Product Name: LC12C, LC17C, LC40C, LC71C, LC73C, LC75C, LC77XLC, LC79C,  
LC400C, LC450XLC, LC1220C, LC1240C, LC1280XLC Ink

Revision Date: 15-Jun-2020

Issuing Date: 12-Apr-2010

Revision Number: 7

Safety data sheet number: BHC021-01

## 1. Identification

### Product identifier

**Product Name** LC12C, LC17C, LC40C, LC71C, LC73C, LC75C, LC77XLC, LC79C, LC400C, LC450XLC,  
LC1220C, LC1240C, LC1280XLC Ink

### Other means of identification

**Safety data sheet number** BHC021-01

### Recommended use of the chemical and restrictions on use

**Recommended Use** These products are dark blue ink in a cartridge for Brother Industries, Ltd. inkjet multifunction devices and fax receivers. The cartridge should be used as supplied by Brother and for use in the products stated. Information provided on this SDS is only consistent with the use specified by Brother.

**Uses advised against** No information available

### Details of manufacturer or importer

#### Manufacturer

Brother Industries, Ltd.  
15-1 Naeshiro-cho, Mizuho-ku, Nagoya 467-8561, Japan  
Telephone (for information): +81-52-824-2735

#### Importer

Brother International (Aust.) Pty. Ltd.  
ACN 001 393 835 Level 3, Building A, 11 Talavera Road, Macquarie Park, NSW 2113, Australia  
Telephone (for information): +61-2-9887-4344

For further information, please contact

**Contact Point** Product Safety Department

**E-mail address** sds.info@brother.co.jp

### Emergency telephone number

**Emergency telephone number** No information available

## 2. Hazard(s) identification

### GHS Classification

Not classified

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## Label elements

Not classified

## Hazard statements

Not classified

## Other hazards which do not result in classification

### **General Hazards**

This product contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This product contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

## **3. Composition/information on ingredients**

### Substance

Not applicable

### Mixture

Chemical name	CAS No	Weight-%
Water	7732-18-5	65-75
Glycerol	56-81-5	10-20
Diethylene glycol	111-46-6	1-9
Triethylene glycol, monobutyl ether	143-22-6	1-5
Cyan Dye	**	1-5
1,2-Benzisothiazolin-3-one	2634-33-5	<0.05

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## **4. First-aid measures**

### Description of first aid measures

#### **General advice**

If symptoms persist, call a physician.

#### **Emergency telephone number**

Poisons Information Center, Australia: 13 11 26  
Poisons Information Center, New Zealand: 0800 764 766

#### **Inhalation**

Get immediate medical advice/attention. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

#### **Eye contact**

Get immediate medical advice/attention. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.

#### **Skin contact:**

Take off contaminated clothing. Wash off immediately with soap and plenty of water.

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**Ingestion** Obtain immediate medical attention. Wash out mouth with water and give 100-200 ml of water to drink.

## **Most important symptoms and effects, both acute and delayed**

**Symptoms** Skin contact: Repeated and/or prolonged skin contact may cause irritation  
Eye contact: May cause eye irritation  
Ingestion: May cause stomach ache. Unlikely route of exposure  
Inhalation : Unlikely route of exposure

## **Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## **5. Fire-fighting measures**

### **Suitable Extinguishing Media**

**Suitable Extinguishing Media** Dry chemical, CO<sub>2</sub>, water spray or regular foam

**Unsuitable extinguishing media** None.

**Specific hazards arising from the chemical** Thermal decomposition of organic components may result in occurrence of oxides of carbon. Toxic gases may be formed upon combustion and represents a hazard to firefighters. Combustion products: See Section: 10.

### **Special protective actions for fire-fighters**

**Special protective equipment for fire-fighters** Use appropriate respirator for carbon monoxide and carbon dioxide. Wear positive pressure self-contained breathing apparatus (SCBA) during the attack phase of firefighting operations and during cleanup in enclosed or poorly ventilated areas immediately after a fire. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic combustion gases from any source.

## **6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid contact with eyes.

**For emergency responders** Use personal protection recommended in Section 8.

### **Environmental precautions**

**Environmental precautions** Prevent substance entering sewers. Washings must be prevented from entering surface water drains.

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## **Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Wipe up with absorbent towel Wash with water to remove remaining traces of ink.

## **Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **7. Handling and storage**

### **Precautions for safe handling**

**Advice on safe handling** Keep out of the reach of children. Avoid contact with skin and eyes.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice

### **Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep away from oxidizing agents

**Incompatible materials** Strong oxidizing agents

## **8. Exposure controls/personal protection**

### **Control parameters**

#### **Exposure Limits**

Chemical name	Australia	ACGIH TLV
Glycerol 56-81-5	10 mg/m <sup>3</sup>	
Diethylene glycol 111-46-6	23 ppm 100 mg/m <sup>3</sup>	

### **Appropriate engineering controls**

**Engineering controls** Good general ventilation should be sufficient under normal use.

### **Individual protection measures, such as personal protective equipment**

**Eye/face protection** If there is a risk of contact: Safety goggles.

**Skin and body protection** If there is a risk of contact: Long sleeved clothing and long pants.

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**Hand protection** If there is a risk of contact: Protective gloves.

**Respiratory protection** In case of large spillages: Wear suitable respiratory protective equipment.

**Environmental exposure controls** Avoid release to the environment.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

**Physical state** Liquid

**Appearance** No information available

**Color** dark blue

**Odor** Slight.

**Odor threshold** No information available

Property	Values	Remarks • Method
pH	7 - 9	
Melting point / freezing point	< -5 °C	
Boiling point / boiling range	> 100 °C	
Flash point	> 94 °C	Tag Closed Cup Cleveland Open Cup
Evaporation rate	No data available	None known
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		None known
Upper flammability limit:	No data available	
Lower flammability limit:	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.0 - 1.1	(H <sub>2</sub> O=1)
Water solubility	Soluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	> 400 °C	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	2 - 5 mPa s	
Explosive properties	Not explosive	
Oxidizing properties	No information available	

### Other Information

**Softening point** No information available

**Molecular weight** No information available

**VOC Content (%)** No information available

**Liquid Density** No information available

**Bulk density** No information available

## 10. Stability and reactivity

### Reactivity

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**Reactivity** No information available.

## Chemical stability

**Stability** Stable under normal conditions.

## **Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

## Possibility of hazardous reactions

**Possibility of hazardous reactions** No information available.

## Conditions to avoid

**Conditions to avoid** No information available.

## Incompatible materials

**Incompatible materials** Strong oxidizing agents.

## Hazardous decomposition products

**Hazardous decomposition products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>).

# 11. Toxicological information

## Acute toxicity

## Information on likely routes of exposure

### **Product Information**

**Inhalation** No information available

**Eye contact** No information available

**Skin contact:** No information available

**Ingestion** Acute LD<sub>50</sub> > 2000 mg/kg

**Symptoms** No information available.

## Numerical measures of toxicity - Product Information

No information available

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The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (dermal) 24,047.90 mg/kg

## Unknown acute toxicity

28.973 % of the mixture consists of ingredient(s) of unknown toxicity

4.573 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

4.573 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

28.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

28.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

13.973 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

## Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water	> 90 mL/kg ( Rat )	-	-
Glycerol	= 12600 mg/kg ( Rat )	> 10 g/kg ( Rabbit )	> 570 mg/m <sup>3</sup> ( Rat ) 1 h
Diethylene glycol	= 12565 mg/kg ( Rat )	= 11890 mg/kg ( Rabbit )	-
Triethylene glycol, monobutyl ether	= 5300 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	-
1,2-Benzisothiazolin-3-one	= 1020 mg/kg ( Rat )	-	-

See section 16 for terms and abbreviations

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation** Non-irritant. (OECD 404 method).

**Serious eye damage/eye irritation** Minimal irritant to the eye. (OECD 405 method).

**Respiratory or skin sensitization** It is not a skin sensitizer (OECD 429 method)

**Germ cell mutagenicity** AMES test : Negative (OECD 471 method)

**Carcinogenicity** Ingredients of this product have not been classified as carcinogens according to IARC monographs, NTP and OSHA

## 12. Ecological information

### Ecotoxicity

**Ecotoxicity** .

**Unknown aquatic toxicity** 0.073 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

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Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Glycerol	-	51 - 57: 96 h Oncorhynchus mykiss mg/L LC50 static	-	500: 24 h Daphnia magna mg/L EC50
Diethylene glycol	-	75200: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 29228 mg/L 15 min	84000: 48 h Daphnia magna mg/L EC50
Triethylene glycol, monobutyl ether	500: 72 h Desmodesmus subspicatus mg/L EC50	2400: 96 h Pimephales promelas mg/L LC50 static 2400: 96 h Pimephales promelas mg/L LC50 2200 - 4600: 96 h Leuciscus idus mg/L LC50 static	-	500: 48 h Daphnia magna mg/L EC50

## Persistence and degradability

**Persistence and degradability** No information available.

## Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

## Component Information

Chemical name	Partition coefficient
Glycerol	-1.76
Diethylene glycol	-1.98
Triethylene glycol, monobutyl ether	0.51
1,2-Benzisothiazolin-3-one	1.3

## Mobility

**Mobility in soil** No information available.

## Other adverse effects

**Other adverse effects** No information available.

## 13. Disposal considerations

### Waste treatment methods

**Waste from residues/unused products** Dispose in accordance with federal, state and local regulations.



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## 14. Transport information

**ADG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## 15. Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National Regulations

##### Australia

See section 8 for national exposure control parameters

#### **Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)**

Classified as a scheduled poison according to the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)

**Poison Schedule Number** 6

#### **National pollutant inventory**

Subject to reporting requirement

Chemical name	National pollutant inventory
Diethylene glycol - 111-46-6	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

#### International Inventories

**TSCA**

Contact supplier for inventory compliance status

**DSL/NDSL**

Contact supplier for inventory compliance status

**EINECS/ELINCS**

Contact supplier for inventory compliance status

**ENCS**

Contact supplier for inventory compliance status

**IECSC**

Contact supplier for inventory compliance status

**KECL**

Contact supplier for inventory compliance status

**PICCS**

Contact supplier for inventory compliance status

**AICS**

Contact supplier for inventory compliance status

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

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**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

## International Regulations

**Ozone-depleting substances (ODS)** Not applicable

**Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## **16. Other information**

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**Revision Date** Jun-15-2020

### **Revision Note**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	**	Trade secret
C	Carcinogen		

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGl(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program

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Organization for Economic Co-operation and Development Screening Information Data Set  
RTECS (Registry of Toxic Effects of Chemical Substances)  
World Health Organization

**Disclaimer**

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**End of Safety Data Sheet**